

## VI.5.5D-ZGRID CONVERT ZONE TO GRID RUNOFF (FFG)

The ZGRID program is used to convert zone/county threshold runoff to HRAP grid runoff.

### Application Guidelines

Areal runoffs for zones and counties are maintained on the area (AFFG) records. Initially, areal runoffs resided on parametric files from previous RFC FFG software which is no longer used. By adding the runoffs to the AFFG records, we can now easily maintain initial gridded runoff, i.e., change, add, delete zones and counties.

Procedure 1 below is the procedure to copy runoffs from the gridded runoff files to the area definition file for later use in Procedure 2. This is a ONE-TIME conversion.

Procedure 2 distributes areal runoffs to grids. This step is executed when area boundaries are changed or when areal runoffs are changed.

1. Add runoffs to area definition records.  
This is a one-time conversion.
  - 1.1 cd to the ../ffg/files/oper/define directory
  - 1.2 Dump area parameters if defarea file is not current or does not exist.
  - 1.3 For mbrfc, ohrfc:  
Add command 'rofb' as first record in file defarea.  
  
For abrfc, lmrfc, ncrfc, serfc, sju, wgrfc:  
Add command 'rozb' as first record in file defarea.  
  
For marfc, nerfc:  
Add command 'rohd' as first record in file defarea.
  - 1.4 If files gridro1, gridro3, and gridro6 are not present, then

```
cp defgrol gridro1
cp defgro3 gridro3
cp defgro6 gridro6
cp defgrol2 gridro12 if used
cp defgro24 gridro24 if used
```
  - 1.5 Run zgrid pgm using script ffg\_zgrid.  
input filename: defarea,  
output filename: defarea\_new  
  
File defarea\_new should be identical to file defarea but also have runoffs on each record.
  - 1.6 mv defarea defarea.old  
mv defarea\_new defarea

2. Runoffs exist on area definition records. Redistribute runoff to grids and/or recompute gridded runoffs when area boundaries or zone/counties are added, deleted, or changed.

2.1 cd to the ../oper/define directory

2.2 Run zgrid pgm using script ffg -p zgrid (or ffg\_zgrid).  
input filename: defarea  
output filename: defarea\_test

Note: files defarea and defarea\_test should be identical. You can remove defarea\_test.

Files gridro1, gridro3, gridro6, etc. are new, too.

2.3 cd to the ../oper/grro directory  
cd ../grro  
and remove the files:  
rm xhr\*

2.4 cd back to the define directory  
cd ../define  
where the gridro1, 3, 6 files are located.

2.5 Now you are ready to load the new gridro files into the FFGS.

### Execution Menu

The execution menu in the ZGRID program prompts the user for an input and output filename.

**NATIONAL WEATHER SERVICE  
FLASH FLOOD GUIDANCE SYSTEM**

**PROGRAM ZGRID - RELEASE x.xx - mm/dd/ccyy**

**CONVERT ZONE/COUNTY RUNOFFS  
TO  
GRIDDED RUNOFFS**

**Enter (d-debug l-logfile <return>-continue):**

Two options are available. Enter 'd' and <return> to turn on debug for internal values. Enter 'l' and <return> to write to a log file.

To continue enter <return> and the following prompt appears:

**Enter path & filename of OLD zone/county (area) runoff define file:**

(If the current directory is the define directory, only the filename is needed.)

**Enter filename of NEW area runoff define file:**

(Enter a filename different than the OLD filename.)

The following summary is printed at program completion:

**Converted nnn area runoffs  
to HRAP grid and AFFG parameters.  
Old area define file: oldname  
NEW area define file: newname**

**ERRORS= nerr      WARNINGS= nwarn**